

MAIL TO:

STATE OF UTAH
DIVISION OF PURCHASING
3150 STATE OFFICE BUILDING, CAPITOL HILL
P.O. BOX 141061
SALT LAKE CITY, UTAH 84114-1061
TELEPHONE (801) 538-3026
<http://www.purchasing.state.ut.us>

Invitation to BidSolicitation Number: **JG3054**Due Date: **10/08/02 @ 2:00 p.m.**

Date Sent: September 19, 2002

Agency ContractGoods and services to be purchased: **POWER METER PEDESTAL & DISCONNECT, W/BATTERY BACK-UP****Please complete**

Company Name		Federal Tax Identification Number	
Ordering Address	City	State	Zip Code
Remittance Address (if different from ordering address)	City	State	Zip Code
Type <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Proprietorship <input type="checkbox"/> Government	Company Contact Person		
Telephone Number (include area code)	Fax Number (include area code)		
Company's Internet Web Address	Email Address		
Discount Terms (for bid purposes, bid discounts less than 30 days will not be considered)	Days Required for Delivery After Receipt of Order (see attached for any required minimums)		
<p>The following documents are included in this solicitation: Solicitation forms, instructions and general provisions, and specifications. <u>Please review all documents carefully before completing.</u></p> <p>The undersigned certifies that the goods or services offered are produced, mined, grown, manufactured, or performed in Utah. Yes_____ No_____. If no, enter where produced, etc._____</p>			
Offeror's Authorized Representative's Signature		Date	
Type or Print Name		Position or Title	

**STATE OF UTAH
DIVISION OF PURCHASING
GENERAL SERVICES**

Invitation to Bid

Solicitation Number: JG3054

Due Date: 10/08/02

Vendor Name:

Item#	Qty	Unit	Description	Unit Price	Extension
001	1	LOT	POWER METER PEDESTAL & DISCONNECT, WITH BATTERY BACK-UP AS PER ATTACHED SPECIFICATIONS. THE AWARD OF THIS BID WILL RESULT IN AN AGENCY CONTRACT FOR A PERIOD OF THREE (3) YEARS WITH ONE (1) ADDITIONAL ONE- YEAR RENEWAL OPTION.	\$	\$

WITH QUESTIONS REGARDING THE SPECIFICATIONS PLEASE CONTACT TRACIE MONTANO AT (801)964-4534.

QUESTIONS REGARDING THE BID PROCESS SHOULD BE DIRECTED TO JARED GARDNER AT (801)538-3342.

THIS IS AN INVITATION TO BID, THEREFORE, YOU MAY EITHER HAND DELIVER OR MAIL IN YOUR BID RESPONSE. BIDS RESPONSES THAT ARE FAXED IN WILL **NOT** BE CONSIDERED.

REFERENCE RX#: 810 36-55

INVITATION TO BID - INSTRUCTION AND GENERAL PROVISIONS

1. **BID PREPARATION:** (a) All prices and notations must be in ink or typewritten. (b) Price each item separately. Unit price shall be shown and a total price shall be entered for each item bid. (c) Unit price will govern, if there is an error in the extension. (d) Delivery time is critical and must be adhered to as bid. (e) Wherever in this document an item is defined by using a trade name of a manufacturer and/or model number, it is intended that the words, "or approved equal" apply. "Or approved equal" means any other brand that is equal in use, quality, economy and performance to the brand listed as determined by the Division of Purchasing & General Services (DIVISION). If the bidder lists a trade name and/or catalog number in the bid, the DIVISION will assume the item meets the specifications unless the bid clearly states it is an alternate, and describes specifically how it differs from the item specified. **MULTIPLE OR ALTERNATE BIDS WILL NOT BE ACCEPTED UNLESS SO STATED IN THE SPECIFICATIONS.** (f) By signing the bid the bidder certifies that all of the information provided is accurate, and that prices bid are correct. (g) This bid may not be withdrawn for a period of 60 days from bid due date.

2. **SUBMITTING THE BID:** (a) The bid must be signed in ink, sealed in a properly-addressed envelope, and either mailed or delivered to the DIVISION OF PURCHASING, 3150 State Office Building, Capitol Hill, Salt Lake City, UT 84114-1061 by the "Due Date and Time." **The "Bid Number" and "Due Date" must appear on the outside of the envelope.**

(b) Bids, modifications, or corrections received after the closing time on the "Due Date" will be considered late and handled in accordance with the Utah Procurement Rules, section R33-3-109. (c) **Your bid will be considered only if it is submitted on the forms provided by the state. Facsimile transmission of bids to DIVISION will not be considered.** (d) All prices quoted must be both F.O.B. Origin per paragraph 1.(c) and F.O.B. Destination. Additional charges including but not limited to delivery, drayage, express, parcel post, packing, cartage, insurance, license fees, permits, costs of bonds, or for any other purpose must be included in the bid for consideration and approval by the DIVISION. Upon award of the contract, the shipping terms will be F.O.B. Destination, Freight Prepaid with freight charges to be added to the invoice unless otherwise specified by the DIVISION. (e) All State purchases are subject to the Utah Procurement Code, Title 63, Chapter 56 Utah Code Annotated 1953, as amended, and the Procurement Rules as adopted by the Utah State Procurement Policy Board (Utah Administrative Code Section R33).

3. **FAILURE TO BID:** Failure to respond may result in the removal of your firm from the bidder's list for the commodity(s) listed, unless you advise DIVISION in writing prior to due date that you desire to receive future invitations to bid on this commodity(s). **Three consecutive no responses will automatically result in removal.**

4. **PROPRIETARY INFORMATION:** Suppliers are required to mark any specific information contained in their bid which is not to be disclosed to the public or used for purposes other than the evaluation of the bid. Each request for nondisclosure must be accompanied by a specific justification explaining why the information is to be protected. Pricing and service elements of any bid will not to be considered proprietary. Bids submitted may to be reviewed and evaluated by any persons at the discretion of the state.

5. **BONDS:** The state has the right to require a bid bond, payment bond and/or a faithful performance bond from the bidder in an amount not to exceed the amount of the contract.

6. **SAMPLES:** Samples of item(s) specified in this bid, when required by DIVISION, must to be furnished free of charge to DIVISION. Any item not destroyed by tests may, upon request made at the time the sample is furnished, to be returned at the bidder's expense.

7. **WARRANTY:** The contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually

agreed upon elsewhere in this contract. The contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah applies to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the contractor's skill or judgement to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.

8. **DIVISION APPROVAL:** Purchase orders placed, or contracts written, with the state of Utah, as a result of this bid, will not to be legally binding without the written approval of the director of the DIVISION.

9. **AWARD OF CONTRACT:** (a) the contract will to be awarded with reasonable promptness, by written notice, to the lowest responsible bidder that meets the specifications. Consideration will to be given to the quality of the product(s) to be supplied, conformity to the specifications, the purpose for which required, delivery time required, discount terms and other criteria set forth in this invitation to bid. (b) The bids are opened publicly in the presence of one or more witnesses. the name of each bidder, and the amount of the bid is recorded. Each bid, and the record, is open to public inspection. (c) The DIVISION may accept any item or group of items, or overall low bid. the DIVISION has the right to cancel this invitation to bid at any time prior to the award of contract. (d) The DIVISION can reject any and all bids. And it can waive any informality, or technicality in any bid received, if the DIVISION believes it would serve the best interest of the State. (e) Before, or after, the award of a contract the DIVISION has the right to inspect the bidder's premises and all business records to determine the holder's ability to meet contract requirements. (f) DIVISION does not guarantee to make any purchase under awarded contract(s). Estimated quantities are for bidding purposes only, and not to be interpreted as a guarantee to purchase any amount. (g) Utah has a reciprocal preference law which will to be applied against bidders bidding products or services produced in states which discriminate against Utah products. For details see Section 63-56 20.5 -20.6, Utah Code Annotated.

10. **ANTI-DISCRIMINATION ACT:** The bidder agrees to abide by the provisions of the Utah Anti-discrimination Act, Title 34 Chapter 35, U.C.A. 1953, as amended, and Title VI and Title VII of the Civil Rights Act of 1964 (42 USC 2000e), which prohibit discrimination against any employee or applicant for employment, or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age, and Section 504 of the Rehabilitation Act of 1973 or the Americans with Disabilities Act of 1990, which prohibits discrimination on the basis of disabilities. Also bidder agrees to abide by Utah's Executive Order, dated March 17, 1993, which prohibits sexual harassment in the workplace. Vendor must include this provision in every subcontract or purchase order relating to purchases by the State of Utah to insure that the subcontractors and vendors are bound by this provision. revision date: 2/14/2000

MAIL TO:

Invitation to Bid

ATTACHMENT A: STANDARD TERMS AND CONDITIONS

1. **AUTHORITY:** Provisions of this contract are pursuant to the authority set forth in 63-56, Utah Code Annotated, 1953, as amended, Utah State Procurement Rules (Utah Administrative Code Section R33), and related statutes which permit the STATE to purchase certain specified services, and other approved purchases for the STATE.
2. **CONTRACT JURISDICTION, CHOICE OF LAW, AND VENUE:** The provisions of this contract shall be governed by the laws of the State of Utah. The parties will submit to the jurisdiction of the courts of the State of Utah for any dispute arising out of this Contract or the breach thereof. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.
3. **LAWS AND REGULATIONS:** Any and all supplies, services and equipment furnished will comply fully with all applicable Federal and State laws and regulations.
4. **RECORDS ADMINISTRATION:** The CONTRACTOR shall maintain, or supervise the maintenance of all records necessary to properly account for the payments made to the CONTRACTOR for costs authorized by this contract. These records shall be retained by the CONTRACTOR for at least four years after the contract terminates, or until all audits initiated within the four years, have been completed, whichever is later. The CONTRACTOR agrees to allow STATE and Federal auditors, and STATE Agency Staff, access to all the records to this contract, for audit and inspection, and monitoring of services. Such access will be during normal business hours, or by appointment.
5. **CONFLICT OF INTEREST:** CONTRACTOR represents that none of its officers or employees are officers or employees of the State of Utah, unless disclosure has been made in accordance with 67-16-8, Utah Code Annotated, 1953, as amended.
6. **CONTRACTOR, AN INDEPENDENT CONTRACTOR:** The CONTRACTOR shall be an independent contractor, and as such, shall have no authorization, express or implied, to bind the STATE to any agreements, settlements, liability, or understanding whatsoever, and agrees not to perform any acts as agent for the STATE, except as herein expressly set forth. Compensation stated herein shall be the total amount payable to the CONTRACTOR by the STATE. The CONTRACTOR shall be responsible for the payment of all income tax and social security amounts due as a result of payments received from the STATE for these contract services. Persons employed by the STATE and acting under the direction of the STATE shall not be deemed to be employees or agents of the CONTRACTOR.
7. **INDEMNITY CLAUSE:** The CONTRACTOR agrees to indemnify, save harmless, and release the STATE OF UTAH, and all its officers, agents, volunteers, and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this contract which are caused in whole or in part by the negligence of the CONTRACTOR'S officers, agents, volunteers, or employees, but not for claims arising from the State's sole negligence.
8. **EQUAL OPPORTUNITY CLAUSE:** The CONTRACTOR agrees to abide by the provisions of Title VI and VII of the Civil Rights Act of 1964 (42USC 2000e) which prohibits discrimination against any employee or applicant for employment or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246, as amended, which prohibits discrimination on the basis of sex; 45 CFR 90 which prohibits discrimination on the basis of age; and Section 504 of the Rehabilitation Act of 1973, or the Americans with Disabilities Act of 1990 which prohibits discrimination on the basis of disabilities. Also, the CONTRACTOR agrees to abide by Utah's Executive Order, dated March 17, 1993, which prohibits sexual harassment in the work place.
9. **SEPARABILITY CLAUSE:** A declaration by any court, or any other binding legal source, that any provision of this contract is illegal and void shall not affect the legality and enforceability of any other provision of this contract, unless the provisions are mutually dependent.
10. **RENEGOTIATION OR MODIFICATIONS:** This contract may be amended, modified, or supplemented only by written amendment to the contract, executed by the parties hereto, and attached to the original signed copy of the contract.
11. **DEBARMENT:** The CONTRACTOR certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract), by any governmental department or agency. If the CONTRACTOR cannot certify this statement, attach a written explanation for review by the STATE.
12. **TERMINATION:** Unless otherwise stated in the Special Terms and Conditions, this contract may be terminated, with cause by either party, in advance of the specified termination date, upon written notice being given by the other party. The party in violation will be given ten (10) working days after notification to correct and cease the violations, after which the contract may be terminated for cause. This contract may be terminated without cause, in advance of the specified expiration date, by either party, upon 90 days prior written notice being given the other party. On termination of this contract, all accounts and payments will be processed according to the financial arrangements set forth herein for approved services rendered to date of termination.
13. **SALES TAX EXEMPTION:** The State of Utah's sales and use tax exemption number is E33399. The tangible personal property or services being purchased are being paid from State funds and used in the exercise of that entity's essential functions. If the items being purchased are construction materials, they will be converted into real property by employees of this government entity, unless otherwise stated in the contract.
14. **WARRANTY:** The contractor agrees to warrant and assume responsibility for all products (including hardware, firmware, and/or software products) that it licenses, contracts, or sells to the State of Utah under this contract for a period of one year, unless otherwise specified and mutually agreed upon elsewhere in this contract. The contractor (seller) acknowledges that all warranties granted to the buyer by the Uniform Commercial Code of the State of Utah apply to this contract. Product liability disclaimers and/or warranty disclaimers from the seller are not applicable to this contract unless otherwise specified and mutually agreed upon elsewhere in this contract. In general, the contractor warrants that: (1) the product will do what the salesperson said it would do, (2) the product will live up to all specific claims that the manufacturer makes in their advertisements, (3) the product will be suitable for the ordinary purposes for which such product is used, (4) the product will be suitable for any special purposes that the State has relied on the contractor's skill or judgement to consider when it advised the State about the product, (5) the product has been properly designed and manufactured, and (6) the product is free of significant defects or unusual problems about which the State has not been warned. Remedies available to the State include the following: The contractor will repair or replace (at no charge to the State) the product whose nonconformance is discovered and made known to the contractor in writing. If the repaired and/or replaced product proves to be inadequate, or fails of its essential purpose, the contractor will refund the full amount of any payments that have been made. Nothing in this warranty will be construed to limit any rights or remedies the State of Utah may otherwise have under this contract.
15. **PUBLIC INFORMATION:** Contractor agrees that the contract will be a public document, as to distribution of copies, and Contractor gives the STATE express permission to make copies of the contract and/or of the response to the solicitation in accordance with the State of Utah Government Records Access and Management Act. The permission to make copies as noted will take precedence over any statements of confidentiality, proprietary information, copyright information, or similar notation.

(Revision date: Apr 24, 2002)

ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

1 Scope:

This document specifies the technical requirements for the purchase of electric Power Meter Pedestals with Battery Backup System (BBS) And Service Disconnects. The BBS module converts battery (DC) power to 120 VAC. It also manages the charging of the batteries and provides alarm status to the signal cabinet. These pedestals will be used for providing power to traffic signal equipment and area lighting. In the event of a power failure, the pedestal and BBS shall provide AC power to the signal equipment. (It is the intent of this specification to select from currently available equipment.)

2 General Requirements:

- 2.1 The Pedestal shall conform to UL508 Industrial Control Panel labels for service entrance equipment requirements.
- 2.2 All equipment covered in this specification shall be manufactured in conformance with ISO 9000 and a copy of the certification shall be required.
- 2.3 See figure 2 for a suggested electrical system configuration.
- 2.4 The Pedestal and BBS shall have all controls and displays well organized and clearly labeled. It is preferred to have power flow graphically drawn from control to control on the control panel. The markings should be clear enough to operate the controls without referring to the documentation.
- 2.5 The Pedestal and BBS shall be designed to operate in all of the following ambient conditions:

<u>temperature</u>	<u>elevation</u>
-35 °C to +74 °C (-30 °F to +165 °F)	1500 m (5000 ft)
-35 °C to +55 °C (-30 °F to +130 °F)	2500 m (8000 ft)
-35 °C to +5 °C (-30 °F to +40 °F)	2500 m (8000 ft) without external ventilation *
* (buried in snow)	

- 2.6 The Pedestal shall have documentation permanently and conveniently attached to the inside of the distribution section or a permanently attached interior documentation storage pocket or pouch.
 - 2.6.1 The documentation shall include the manufacturer's name, address and phone number, a wiring diagram, date of manufacture, and all necessary information to order an identical pedestal and replacement parts.
 - 2.6.2 There shall be adequate documentation to easily understand and operate all controls; including installation, turn-on, and shut-down procedures.
 - 2.6.3 There shall be complete schematics for the entire system and all electrical components.
 - 2.6.4 MSDS reports shall be provided with each cabinet.
- 2.7 Manufacturer shall provide a warrantee for 2 years after the date of purchase or 1 year after the date of installation, whichever is longer. Warrantee shall be for all components including the batteries. In no case shall the warrantee be less than the manufacturer's normal warrantee.
 - 2.7.1 The period of guarantee coverage shall, in no case, be less than the manufacturers usual and customary guarantee period. All guarantees that are customarily issued by the Bidder and/or manufacturer shall be provided to the State of Utah.
 - 2.7.2 With the consent of the manufacturer, UDOT or their appointee, may make minor repairs. The manufacturer will make all other repairs under warranty. The manufacturer will bear all costs including labor, parts, and shipping charges.

ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

- 2.8 All software required for maintenance and updates shall be included. There shall be software licenses for 10 users and updates for 2 years.
- 2.9 The BBS shall support NTCIP control and status, protocol current at the time of manufacturer, and shall provide updates for 2 years after the purchase date at no additional cost.
- 2.10 All proposed vendors shall submit 2 sets of brochures and/or engineering drawings (including dimensions, bill of materials, and schematics), and a product sample for inspection and UDOT for approval.
- 2.11 Equipment NOT to be included in the bid: foundation anchor bolts, foundation seal, locks, and electric meter.

3 Cabinet Requirements:

- 3.1 The Pedestal shall be a self-standing and raintight NEMA 3R cabinet.
- 3.2 The Pedestal shall be fabricated of 3.0 mm (0.120 inch) minimum thickness anodized aluminum as required in accordance with NEMA 3R construction. All exterior cabinets and doors seams shall be continuously welded with smooth seams. All welds shall be free from any voids. Edges shall be rounded to a radius of 0.8 mm (0.030 inch) minimum.
- 3.3 The Pedestal doorframe shall be designed such that the latching mechanism will hold tension on, and form a firm seal around, the door gasket. All exterior access panels shall be equipped with weather seals. Each exterior door and access panel shall have provision for a paddle lock. (UDOT and/or the power utility will supply the external locks.)
- 3.4 The Pedestal shall have a service entrance, meter, battery, and distribution compartments.
- 3.5 The Pedestal shall have cabinet dimensions that comply with Figure 1. Compartment locations in the cabinet may vary.
- 3.6 The Pedestal shall be designed to be bolted down to a concrete foundation or pad, with 17 mm (0.675 inch) maximum diameter bolts extending out from the foundation or pad. The bolts will extend above the foundation a minimum of 20 mm (0.8 inch) and a maximum of 50 mm (2.0 inch).
- 3.7 The Pedestal base shall have dimensions that comply with Figure 1, detail A-A. All foundation bolts shall be secured inside the pedestal. The installer shall furnish a flat foundation or pad with the tie down bolts, conduits, and ground rod installed. No other mounting brackets will be installed in the concrete.
- 3.8 The Pedestal shall have adequate clearances with conduits extending out of the foundation and into the cabinet 50 mm (2.0 inch) maximum.
- 3.9 The Pedestal shall have adequate clearances for pulling and connecting to service and distribution (field) wiring.
- 3.10 All exterior components shall be rustproof. The exterior shall not have any exposed hardware (such as nuts, bolts, etc.), except for handles or as otherwise specified.
- 3.11 All cabinet openings shall be designed to prevent entrance of insects (such as wasps, hornets, bees, etc.) and varmints when access panel and doors are closed. The ventilation holes shall have permanently installed insect screens.

ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

- 3.12 The cabinet shall have air filters, as required to reduce the dust in the cabinet, but these are not adequate for insect prevention.
- 3.13 The cabinet shall have sealed windows made of shatter resistant Lexan (or equivalent) for meter reading and photocell operation. The meter shall be readable from the front of the cabinet.
- 3.14 A corrosion resistant barrier shall separate each compartment. Compartments shall be designed for safety and ease of maintenance, and shall have an access panel or access door with stainless steel piano hinges. All fastening hardware shall be rustproof. Screws shall be drilled for utility seals.
- 3.15 The BBS module shall be shelf-mount, rack-mount, swing-tray mount or a combination thereof, provided it is earthquake resistant. At a minimum, the space for the BBS module shall be adequate for a unit that is 435 mm x 180 mm x 255 mm (17 inch x 7 inch x 10 inch) plus space for cabling and adequate ventilation.
- 3.16 The battery compartment shall be designed to reduce damage from possible battery failures. The battery compartment shall have adequate room for batteries required in paragraph 5.1. Batteries shall remain in their designated position during an earthquake when the cabinet doors are closed.
- 3.17 The cabinet shall be configured to provide for safe installation and maintenance of the BBS and batteries. Removal and installation of the batteries and/or BBS shall be performed while power continues to be provided to the intersection through the bypass circuit breaker.
- 3.18 All labels shall be permanent (etched or engraved) and mechanically fastened to the cabinet. Adhesives are not acceptable. The front exterior of the cabinet shall be labeled "UDOT SIGNAL AND LIGHTING DISCONNECT" and "CAUTION – BATTERY BACKUP SYSTEM – DANGEROUS VOLTAGES ARE ALWAYS PRESENT"
- 3.19 Because of the enclosed batteries, the cabinet shall be marked in compliance with OSHA's requirements for Hazardous Materials (HazMat).

4 Electrical Requirements:

- 4.1 The Pedestal shall be pre-wired according to NEC and NEMA specifications.
- 4.2 The Pedestal shall be fully wired with UL approved copper THHN (or UL approved equivalent) cable bussing, fully rated.
- 4.3 The Pedestal shall be rated for 1 phase, 120/240 volt, 3 wire, 100 Amp service.
- 4.4 The Pedestal shall have 200 Amp Utility Landing Lugs rated for 250 MCM wire.
- 4.5 The Pedestal shall have provision for terminating to a grounding rod.
- 4.6 The Pedestal shall be fitted with EUSERC approved power meter base with manual link bypass.
- 4.7 The Pedestal shall meet EUSERC requirements for all mounting hardware and installation details.
- 4.8 The Pedestal shall have provision for distribution of both metered and un-metered power. Metered for the Traffic Signal Equipment and un-metered for Area Lighting.

ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

- 4.9 The Pedestal shall have circuit breakers that are UL approved, industrial grade, and rated for 10 KAIC minimum.
- 4.10 The Pedestal shall have a double pole 50 Amp main circuit breaker labeled "UNMETERED MAIN".
 - 4.10.1 A minimum of one double pole 20 Amp (120/240 Volt) circuit breaker labeled "LIGHTING". The LIGHTING circuit breaker shall be secondary to the UNMETERED MAIN circuit breaker.
 - 4.10.2 There shall be a minimum capacity for two (total) un-metered double-pole circuit breakers.
- 4.11 The Pedestal shall have a photocell for controlling the highway lighting. The photocell control shall not be responsive to vehicle headlights or other incidental area lighting. There shall be a lighting test switch to bypass the photocell control labeled "LIGHTING TEST / NORMAL".
- 4.12 The Pedestal shall have a double pole 70 Amp main circuit breaker labeled "METERED MAIN".
 - 4.12.1 A minimum of one single pole 50 Amp fast acting circuit breaker labeled "TRAFFIC SIGNAL – BBS BYPASS". The TRAFFIC SIGNAL – BBS BYPASS circuit breaker shall be secondary to the METERED MAIN circuit breaker.
 - 4.12.2 A minimum of one single pole fast acting circuit breaker labeled "TRAFFIC SIGNAL – BBS". The TRAFFIC SIGNAL – BBS circuit breaker shall be secondary to the METERED MAIN circuit breaker. It shall be rated as required to reliably supply power to the BBS while outputting power under full rated load and charge the batteries.
 - 4.12.3 There shall be a minimum capacity for four (total) metered single-pole circuit breakers.
- 4.13 The pedestal shall have a generator input power connector. It shall be a 120 Volt / 50 Amp twist-lock connector with a spring actuated weatherproof cover. It shall be placed on the outside of the cabinet at least 400 mm (16 inch) above the base of the cabinet.
- 4.14 The pedestal shall have a Traffic Signal Source Select Switch. It will select between Generator power, BBS power, or BBS bypass power. An isolated pole of the switch shall provide status to the intersection controller. (The vendor may divide this switch into two switches; i.e. a generator transfer switch and an manual bypass switch.) The configuration shall prevent back-feeding of power from any power source to any other input. Make-before-break switches are not allowed.
- 4.15 The pedestal shall have all bypass circuits components rated for 50 Amp minimum; that is generator circuits, switches, circuit breakers, connectors, wiring, and terminal blocks.
- 4.16 The pedestal shall provide terminal strips and/or breaker outputs in the distribution compartment for "Signal Cabinet Power Output" and "Lighting". All outputs shall be clearly labeled.
- 4.17 The pedestal and BBS shall have status outputs to the signal controller. A terminal strip for status to the intersection controller shall be labeled and conveniently located. There shall be isolated contact closures (C, NO, & NC) for status. The minimum status requirements are:
 - 4.17.1 On Battery status shall indicate when the BBS is running on battery power.
 - 4.17.2 Low Battery status shall indicate when there are 2 to 4 hours (adjustable) of BBS run time remaining. The low battery alarm shall be used to put the intersection into flash. This will reduce the load current. This reduced load will result in a longer runtime. The alarm is required to remain latched until utility power has been restored.
 - 4.17.3 BBS Fail status shall indicate that the system has detected a failed condition. The "BBS Fail" shall default to an alarm status.

ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

- 4.17.4 Timer shall be a delay timer that shall start timing when there is a utility service outage. It shall be adjustable from 0.25 to 2 hrs minimum. The timer contacts shall remain in the normal position and actuate after the preset time has passed.
 - 4.17.5 Output Source Select Switch status indicates the switch position is "On BBS Auto": "On Manual Bypass" or "On Generator".
 - 4.17.6 BBS Overload status indicating that the BBS output is over current and on bypass.
- 4.18 If required the Pedestal shall have battery thermostatically controlled heaters to protect the batteries from excessively low temperatures. The thermostat shall be sealed to prevent contamination.

5 Battery Backup System (BBS) Requirements:

- 5.1 The BBS shall transfer to battery power mode whenever the utility power is outside of the voltage range of 100 VAC to 130 VAC (± 3 VAC).
- 5.2 The BBS shall transfer to battery backup mode after loss of utility power in less than 150 milliseconds.
- 5.3 When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, 60Hz ± 2.5 Hz, sine wave output with less than 5% total harmonic distortion (THD) with loads from 20% to 100%
- 5.4 The BBS shall have a minimum continuous 875W / 1000VA active output capacity with 80% minimum inverter efficiency. The BBS shall operate with a load from 0% to 100%.
- 5.5 When the utility power has been restored to within the range of 105 VAC to 128 VAC (± 3 VAC) for more than 30 seconds, the BBS shall dropout of battery power mode and return to utility power mode. This transfer time shall be a maximum of 150 milliseconds.
- 5.6 The BBS shall have a minimum of the following controls and indications: power on/off switch, battery/bypass mode switch, and battery charge level indication.
- 5.7 The BBS shall be equipped with alarms to indicate the status of the battery backup system. See paragraph 4.17 for details.
- 5.8 In the event of inverter failure, battery failure, or complete battery discharge, the output shall revert to utility power mode.
- 5.9 Each battery module shall have a 50 Amp, Anderson connector for connection to the pedestal.
- 5.10 The pedestal shall have batteries that are individually fused. Batteries shall be configured such that the BBS shall continue to operate with the failure of one battery.
- 5.11 Recharge time for the battery, from full discharge to 80% of battery charge capacity or more shall not exceed twenty (20) hours.
- 5.12 The battery recharge current shall be in the battery manufacturer's suggested range.
- 5.13 The BBS shall protect the batteries from over-charging and over-discharging.
- 5.14 BBS shall not feedback power to the utility service per UL 1778, Section 48 "Back-feed Protection test".
- 5.15 BBS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.

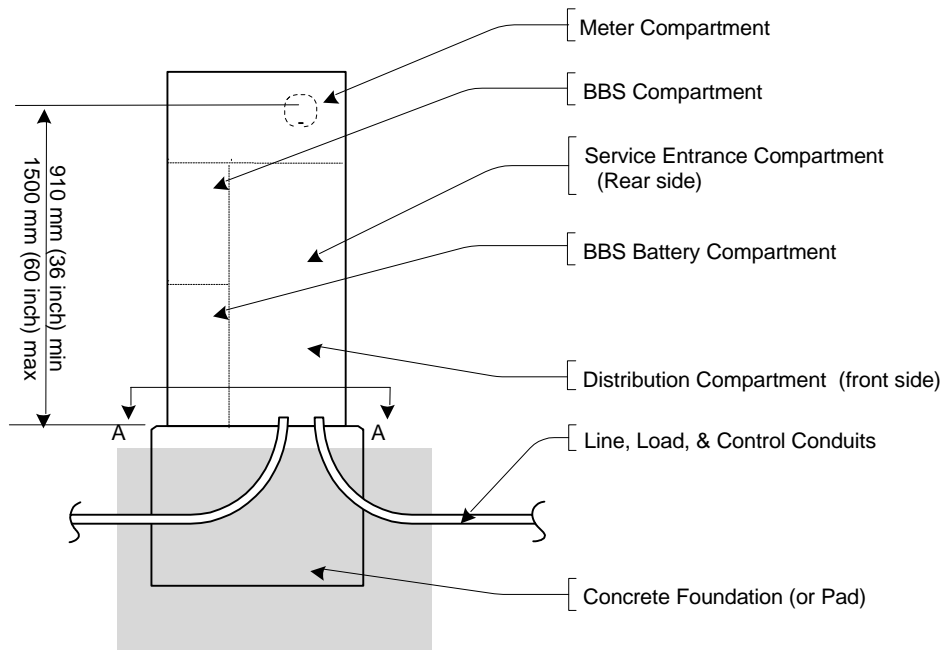
ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

6 Batteries for Battery Back-up System.

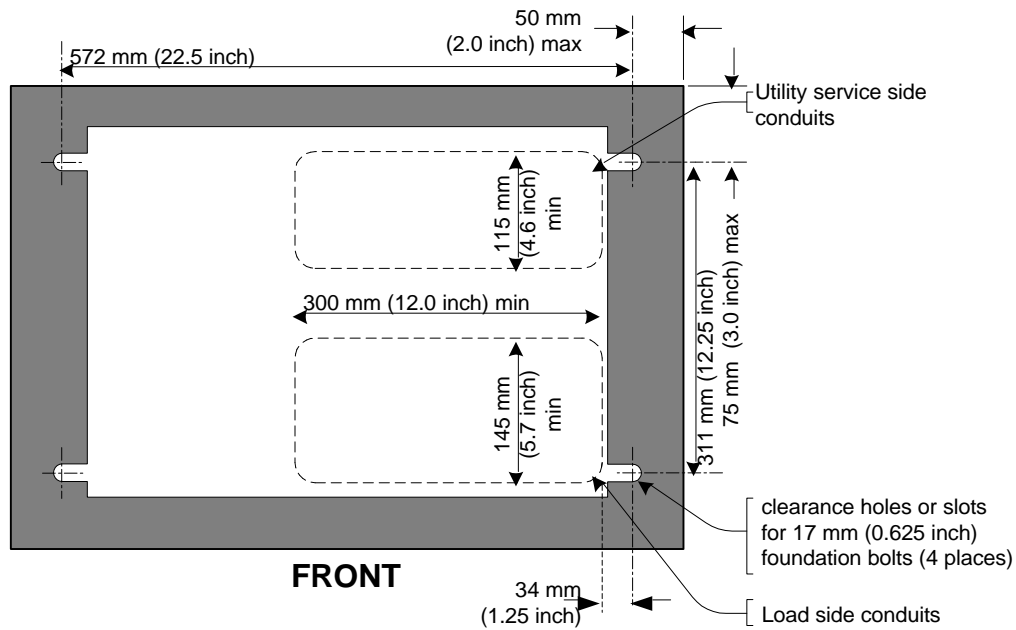
- 6.1 Batteries shall be deep cycle, sealed prismatic lead-calcium based AGM/VRLA (Absorbed Glass Mat/ Valve Regulated Lead Acid) or approved equivalent.
- 6.2 The Batteries shall be manufactured in the United States of America using standard BCI case sizes.
- 6.3 The Batteries shall be standard catalog items available from two or more manufacturers.
- 6.4 The pedestal shall have a minimum battery capacity to supply 700-Watts output to the load for 2 hours.
- 6.5 Batteries shall be certified by the manufacturer to operate over a temperature range of – 25°C to +74°C (-15 °F to +165 °F).
- 6.6 There shall be a 50 Amp Anderson connector on each battery module.

ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

Figure 1. Power Meter Pedestal & Disconnect with Battery Backup

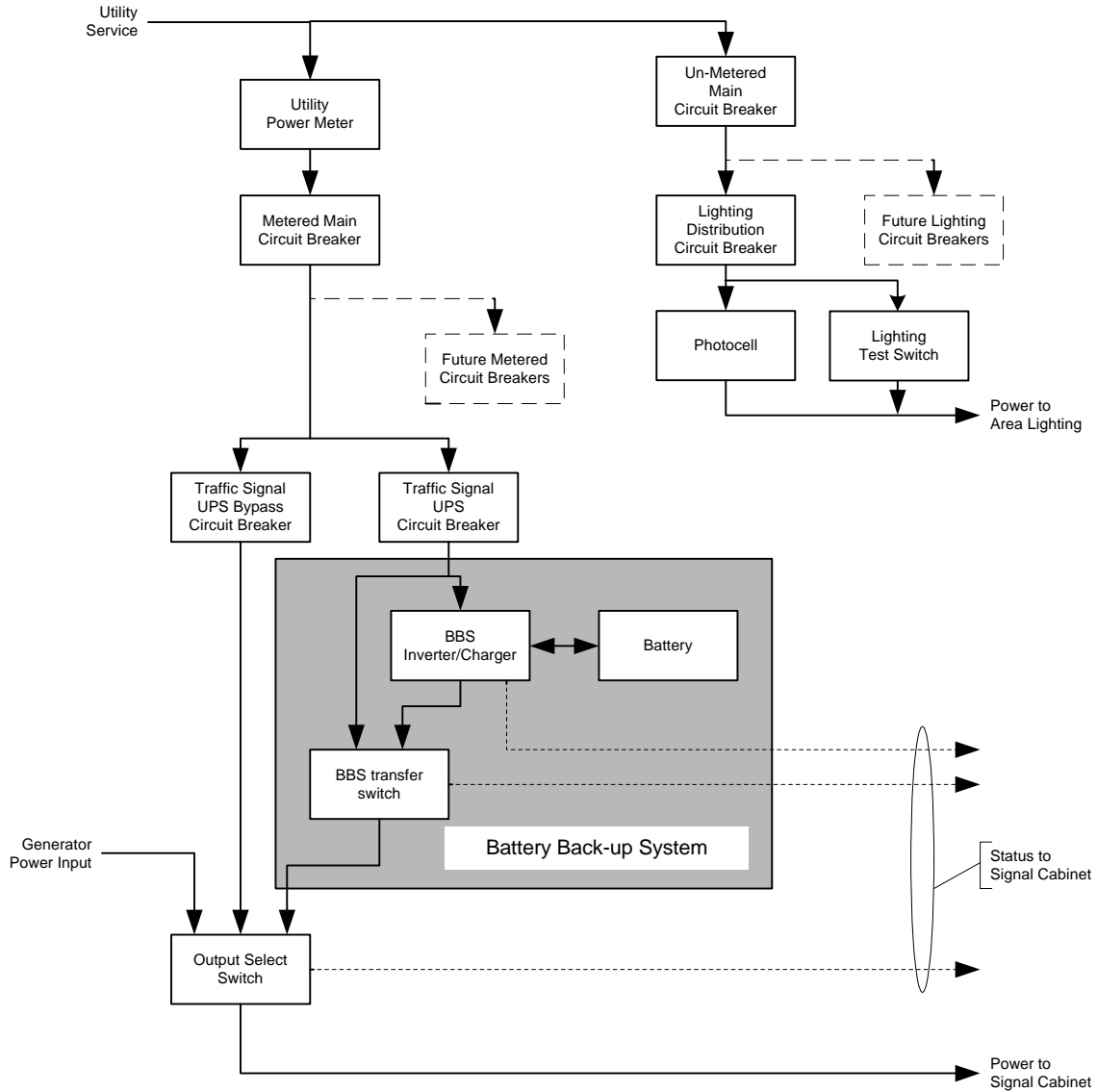


Detail A-A Pedestal Base



ATTACHMENT B:
Purchase Specification / Technical Requirements
Power Meter Pedestal & Disconnect, with Battery Backup

**Figure 2 - Suggested Configuration for
Power Meter Pedestal with Battery Backup System**



ATTACHMENT C: SPECIAL TERMS AND CONDITIONS
Power Meter Pedestal & Disconnect with BBS

1. **CONTRACT PERFORMANCE TERM** This is a requirements contract to provide the state with Power Meter Pedestal & Disconnect with BBS, for a period of three (3) years, with an additional one-year options.
2. **CONTRACT ACCEPTANCE** At the time the bid is signed by the Offeror, the signature of that Offeror will be used as a legally binding signature if awarded this contract. When signed by the Division of Purchasing and a Utah Department of Transportation representative and assigned a contract number, this document will become a legally binding contract with the Offeror for the contract period specified.
3. **QUANTITY OR AMOUNT ESTIMATES** The State does not guarantee to purchase any amount under this contract. Estimated contract amounts are for bidding purposes only and are not to be construed as a guarantee to purchase stated amount. UDOT reserves the right to purchase contract items from other sources to meet non-receiving requirements when approved by agency Procurement Manager.
4. **NON-ASSIGNMENT** The Contractor shall not sublet, assign or transfer any part of this contract without prior written approval from UDOT's Procurement Manager. The provision of monies due under this contract shall not be assignable without prior approval from UDOT's Procurement Manager or Procurement Supervisor.
5. **INVOICING** THE CONTRACT AND ORDER NUMBER MUST APPEAR ON ALL INVOICES. BILLS OF LADING, PACKAGES AND ALL CORRESPONDENCE RELATING TO EACH ORDER AND DELIVERY. In the event the State is entitled to a cash discount, the period of computation shall commence on the delivery date or the date of a correct invoice, whichever is later. If an adjustment in payment is necessary due to damage, the cash discount period shall commence on the date final approval is authorized. The State reserves the right to adjust incorrect invoices.

The Contractor shall submit invoices to:

UTAH DEPARTMENT OF TRANSPORTATION
4501 South 2700 West
Box 141500
Salt Lake City, Utah 84119

The State will remit payment by mail.

6. **PRICING**
The Contractor agrees prices on Power Meter Pedestal & Disconnects with BBS in this contract shall be guaranteed for at least three (3) years. Any change request on prices must be made at least thirty (30) days prior to the requested effective date. Any such request must include sufficient documentation supporting this request. Request for change on any pricing in this contract shall not be effective until it is approved by UDOT's Procurement Manager.
7. **DELIVERY** The shipping terms on this contract are F.O.B. destination.

ATTACHMENT D: PRICING

Power Meter Pedestal & Disconnect with BBS

1.0 Power Meter Pedestal & Disconnect with BBS \$_____